Friday Harbor Wastewater Infrastructure Needs

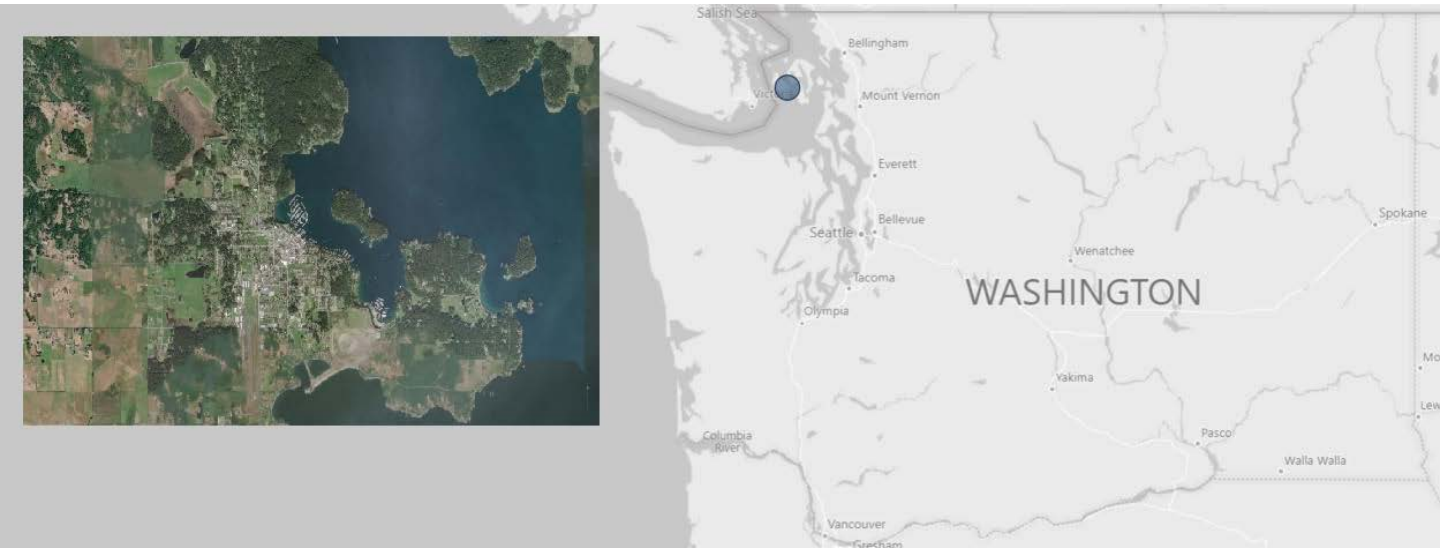

Figure 1: The Town of Friday Harbor is situated on San Juan Island in the North Puget Sound.

More information

Ecology spoke with the Town of Friday Harbor to gather a representative example of small community wastewater infrastructure needs. Founded in 1909, The Town of Friday Harbor is the only municipality in San Juan County, and is the County's Seat and business center.

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ADA Accessibility

To request an ADA accommodation, contact Emma Hanson (details above), or visit https://ecology.wa.gov/accessibility for relay service or TTY call 711 or (877) 833-6341.

Community vision

The Town was once a thriving agricultural center and had a waterfront salmon cannery. Today, tourism is the largest industry, with lodgings and restaurants. The square-mile historic town hosts a scenic, working harbor that welcomes ferries, seaplanes, and boaters to its docks. The Town is home to the University of Washington Marine Biology Laboratories and the Luxel Corporation.

Quality of life is the main draw for the Friday Harbor's 2,490 permanent residents.

Existing wastewater infrastructure

The town has a wastewater treatment plant (WWTP) and a sewer collection system with about 950 connections. The plant was built in 1969 and in 2004 construction was completed for a conversion to a sequencing batch reactor (SBR).

The Town's general sewer plan was updated in 2019 and is currently in review with Ecology. The Town anticipates receiving comments and finalizing the plan by the end of 2020. Other recent work the Town has implemented includes:

- Planning associated with a WWTP renovation for the purpose of converting the SBR system to a conventional treatment system for improved water quality;
- Planning associated with an outfall replacement project. Treated wastewater from the WWTP flows through the outfall pipe discharging into Friday Harbor;

- Stopping the WWTP's biosolids drying process and instead hauling the dewatered biosolids, one to two times a week, to La Conner. La Conner uses the biosolids to make compost. The Town deems it a very successful program that has eliminated the cost for a new biosolids dryer and odor complaints from the community;
- Adding a headworks facility and tertiary filtration system to the WWTP. This tertiary system cleans the effluent before discharge into the Puget Sound; and
- Prior to COVID-19 regulations, the Town had crews repairing faulty manholes in the sewer collection system.

Needed wastewater infrastructure

The Town has three main needs, the first being renovation to their WWTP. The current SBR is deemed ineffective and a renovation will improve air and water quality, which are two major community goals. The renovation includes:

- Converting the plant from SBR to conventional treatment capable of meeting anticipated nutrient standards. It may be very expensive for the Town's WWTP to meet future nutrient requirements
- Constructing a new dewatering facility for the biosolids, and
- Constructing a new conveyor belt for the biosolids.

Secondly, as an old town, the current sewer collections system is deficient, with lots of infiltration and inflow problems. Some of the activities to fix these problems include:

- Addressing the clay pipes, that most homes have, which may run across private properties,
- Fixing manholes and relining pipes, and
- Addressing roof drains that are hooked into the sewer system. During winter storms, roof runoff can cause inundation on the collection system and the plant.

Finally, the Town intends to replace the plant's outfall line, which discharges into the Town's harbor. The Town is currently designing the replacement through an agreement with Ecology.

In March 2020, $13.2 million was specifically estimated for the WWTP upgrades. Considering the sewer collection system needs the Town could easily be facing slightly over $14 million in necessary improvements over the next three years. The Town is wary of the anticipated nutrient standards to be set forth on wastewater effluent. It will be very expensive for the Town's plant to treat down to the expected levels.

Fiscal standing

Debt

The Town assumed a $4 million debt to the United Stated Department of Agriculture (USDA) for the recently completed plant upgrades (tertiary treatment and headworks).

The Town has about $182,630 in loan debt to Ecology. $62,000 of the debt is from a general sewer plan including an infiltration and inflow study, and $120,630 is from the design of the sewer outfall replacement. The Town plans to retire the Ecology debts within the next seven years.

Funding sources

For the plant upgrades, the Town is currently applying for funding through the USDA, under which they qualify for low income incentives. The Town is familiar with USDA, having previously received funding from them. The Town anticipates that the loan portion's interest rate would be 1.1% over a 40 year amortization, thus they are hoping to receive at least $3 to 4 million in grant dollars to work down the principal. If the Town doesn't obtain grant from the USDA, they may portion out the project and apply to fund these portions through Ecology.

The Town's current monthly sewer bill is $123 for single-family homes. The utility rates increase 3 to 4% per year. The Town offers a discounted senior rate; however, it's difficult for them to provide discounts due to the high expense of both ongoing maintenance and capital expenditures.

During the summer, the Town's infrastructure serves at least 400 hotel rooms and over 7,000 people daily. Tourism sales tax doesn't add a direct payment to sewer. With the small number of sewer connections and the large influx of seasonal use, the Town needs grant assistance, not just low-interest loans, to run, improve and pay for sewage treatment.

Public involvement

The Town government receives little pushback from the public when increasing rates or initiating new infrastructure projects. However, they look to leadership to continually communicate and implement secure rate increases.